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S. Robert Chung 39,140
Name Registration No (if applicable)

Signature
Date 2-17-05

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JW

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No. : 09/574,456
Applicant(s) : Mario Elam Tremblay, et al.
Filed : May 19, 2000
Title : Methods of Removal of Nano-Sized Pathogens From Liquids
TC/A.U. : 1724
Examiner : Ivars C. Cintins
Conf. No. : 7765
Docket No. : 7568M
Customer No. : 27752

APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450
Dear Sir,

This Brief is filed pursuant to the appeal from the Final Office Action mailed June 16, 2004. A timely Notice of Appeal was filed on August 11, 2004.

REAL PARTY IN INTEREST

The real party in interest is The Procter & Gamble Company of Cincinnati, Ohio.

RELATED APPEALS AND INTERFERENCES

There are no known related appeals, interferences, or judicial proceedings.

STATUS OF CLAIMS

Claims 1 to 11 are cancelled.
Claims 12 to 16 are appealed.
Claims 17 to 31 are cancelled.

A complete copy of the appealed claims is set forth in the Claims Appendix attached herein.

STATUS OF AMENDMENTS

No amendment was filed after the Final Office Action was mailed.

SUMMARY OF CLAIMED SUBJECT MATTER

The present invention relates to filters containing activated carbon for the removal of nano-sized particles from a liquid. [*Claim 16*] Many water borne contaminants, such as bacteria and viruses fall within the category of nano-sized particles. [*spec. at pg. 1*] The activated carbon particles of the present filters do not require supplemental coatings or the addition of microbiocidal aides such as silver, to accomplish nano-particle removal. [*spec. at pgs. 2-3*] The articles of manufacture of the present claims include information which communicates to a user that the filter may be used to remove nano-sized pathogens from a liquid. [*Claim 16*]

The efficiency of the nano-particle removal for a filter can be measured by a variety of methods. One such method is the VRI, or Virus Removal Index. [*spec. at pg. 7, and Claim 16*] The present invention requires a 4 log reduction in the virus concentration, that is a removal rate of 99.99%, at a flow rate of 100 mL/min. at 1 hour at an influent concentration of 5×10^8 MS-2 bacteriophages per liter. [*Claim 16*]

GROUNDINGS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 12-16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicants' admitted prior art or Koslow, (U.S. Patent No. 5,922,803) in view of Wallis, et al. (U.S. Patent No. 3,770,625). The Examiner asserts that both the Applicants' admitted prior art (that is, the commercially available filter tested in the Example, page 10 of the specification) and Koslow '803 are structurally identical to Applicants' filter and that Wallis '625 teaches that similar activated carbon filters are capable of removing nano-sized pathogens from a liquid.

ARGUMENTS

The office action acknowledges that the present claims differ from the cited prior art in that the present invention requires the recitation of information which communicates to a user that the filter may be used to remove nano-sized pathogens from a liquid. The Office Action goes on to state that the teachings of Wallis render this information obvious. But such is not the case because the Examiner has failed to establish a prima facie case of obviousness.

In particular, the Examiner bears the burden of factually supporting any prima facie conclusion of obviousness. In determining the differences between the prior art and the claims, the question is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. See *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530 (Fe. Cir. 1983). Distilling the invention down to the "gist" or "thrust" of an

invention disregards the requirement of analyzing the subject matter "as a whole." See *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540 (Fed. Cir. 1983). If, viewing the invention as a whole, the examiner does not produce a prima facie case, the applicant is under no obligation to submit evidence of non-obviousness. See *In re Fritch*, 972 F.2d 1260 (Fed. Cir. 1992). In other words, under current law, Applicants are not initially required to make any special showing of new, unexpected, or useful function to be considered patentable. Inventors of unobvious compositions, such as those of the present invention, enjoy a *presumption* of non-obviousness, which must then be overcome by the Examiner establishing a case of prima facie obviousness by the appropriate standard. If the Examiner does not prove a prima facie case of unpatentability, then without more, the Applicant is entitled to grant of the patent. See *In re Oetiker*, 977 F.2d 1443.

To establish a prima facie case of obviousness under 35 U.S.C. §103, the Examiner must meet three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest *all* the claim limitations. See, for example, *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991). Appellants respectfully assert that the Examiner fails to establish the first two of these criteria, and thus, fails to establish a prima facie case of obviousness.

More specifically, there is no motivation in the Koslow reference, the commercially available filter or Wallis to combine their teachings. Wallis is relied on for the teaching that carbon filters can remove viruses. But Wallis never teaches or suggests the use of activated carbon particles *alone*, as taught in present invention. [see, page 3, line 7 of the present specification]. Instead, Wallis, teaches throughout its specification that the activated carbon must be "treated" with an "inorganic hydrolyzing composition of matter containing sodium". [see, for example, column 1, lines 60-66, of Wallis] The removal of nano-sized particles with certain coating materials is known, and that is all that Wallis teaches. What was not known, until the present invention, was the removal of these small particles with activated carbon *alone*. One skilled in the art would not be motivated to modify the teachings of Wallis to formulate an uncoated filter media because Wallis teaches and suggests an inorganic hydrolyzing composition of matter containing sodium for every one of its embodiments.

Moreover, there would be no expectation that combining the teachings of Wallis, with either of the commercially available filter or Koslow, and then modifying those teachings to arrive at the present invention, would produce a filter that removed nano-sized particles. Once again,

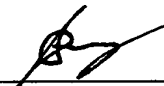
Wallis, teaches only coated filter particles and there is no teaching or suggestion that uncoated particles would remove nano-sized particles. As such, the Examiner has failed to establish a prima facie case of obviousness.

SUMMARY

In view of all of the above, it is respectfully submitted that the Examiner has failed to establish a prima facie case of obviousness with the present rejection. There is no motivation to combine or modify the cited references, nor is there any expectation that the combination would successfully produce the article of manufacture of the present invention. As such, it is respectfully requested that the present rejection be over turned and the claims be allowed.

Respectfully submitted,

THE PROCTER & GAMBLE COMPANY



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Date: February 17, 2005

Customer No. 27752

CLAIMS APPENDIX

Claims 1-11 (Canceled).

12. (Previously Presented) An article of manufacture, comprising:
- (a) a filter, including:
- i) a housing;
 - ii) a filter core disposed within said filter housing consisting essentially of particles selected from the group of activated carbon particles and non-carbonaceous particles; and
 - iii) wherein said carbon particles have an interparticle spacing wherein the filter has a VRI of at least about 99.99% at a flow rate of 100 mL/min. at 1 hour at an influent concentration of 5×10^8 MS-2 bacteriophages per liter; and
- (b) information which communicates to a user that the filter may be used to remove nano-sized pathogens from a liquid.
13. (Previously Presented) The article of claim 12, wherein said filter has a VRI of at least about 99.999% at a flow rate of 100 ml/min. at 6 hours at an influent concentration of 5×10^8 MS-2 bacteriophages per liter.
14. (Previously Presented) The article of claim 12, wherein said filter has a VRI of at least about 99.9999% at a flow rate of 100 ml/min. at 10 hours at an influent concentration of 5×10^8 MS-2 bacteriophages per liter.
15. (Original) The article of Claim 12 wherein the filter comprises activated carbon particles having inter-particle spacings that result in a bulk density of from about 0.6 to 0.8 g/cm³.
16. (Original) The article of Claim 12 wherein a mixture of activated carbon particles of different size and/or shape are utilized.

Claims 17-31 Canceled.

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EVIDENCE APPENDIX

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RELATED PROCEEDINGS APPENDIX